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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,889	01/21/2004	Jochen Straehle	10191/3525	5444
26646	7590	05/23/2006	EXAMINER	
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			DETSCHER, MARISSA	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,889

Applicant(s)

STRAEHLE, JOCHEN

Examiner

Marissa J. Detschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, and 4-11 is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on April 14, 2006, has been fully acknowledged by the Examiner and has been entered into consideration. In view of the amendment to the title, the objections to the specification have been withdrawn.

The amendments to the claims filed on April 14, 2006 resulting in new claims 12-17 are not disclosed or suggested in Sonehara. However, new claims 12-17 are rejected under 35 U.S.C. 102(b) as indicated below in view of the prior art of Tearney et al. (USPN 6,143,003). Furthermore, since new claims 7-11 depend from claim 1, which is in condition for allowability, these claims are also in condition for allowability.

Claim Objections

Claims 1, 5, 7, 8, and 12 are objected to because of the following informalities:

As to claim 1, line 11, the phrase "may be influenced" should read as "is influenced" since the active optical element must be influenced by at least one of an electric field and a magnetic field to change an optical path length of a light path. The change in optical path length would not occur without the introduction of an outside electric or magnetic field to the active optical element.

Additionally, in regards to claim 1, lines 13-14, the phrase "being adapted to change" should read as "for changing" since it has been held that the recitation that an element that is "adapted to" perform a function is not a positive limitation but only

requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchinson, 69 USPQ 138

As to claim 5, lines 1-2, the phrase "the at least one active optical element" should read "the at least one of the active optical elements"

As to claim 7, line 3, the phrase "the active optical are" should read "the active optical elements are"

As to claim 7, line 5, the phrase "the object light path changeable" should read "the object light path is changeable"

As to claim 8, line 2, the phrase "second active optical element includes" should read "second active optical element include"

As to claim 12, lines 6-7, one of the phrases "which is directed via a reference beam" should be removed.

As to claim 12, line 11, the phrase "may be influenced" should read "is influenced" because the at least one active optical element in this limitation definitely must be influenced by at least one of an electrical field and a magnetic field to change an optical path length

Additionally, in regards to claim 12, lines 13-14, the phrase "being adapted to change" should read as "for changing" since it has been held that the recitation that an element that is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchinson, 69 USPQ 138

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 13, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tearney et al. (USPN 6,134,003).

As to claim 12, Tearney discloses an interferometric measuring device for measuring a surface of an object by depth scanning (Figure 4), comprising:

A short coherent light source (2) for emitting light;

A beam splitter (106), the emitted light being guided to the beam splitter, the beam splitter producing an object beam which is directed via an object beam path (110) to the object (14) and a reference beam which is directed via a reference beam path (188) to a reference surface (12);

An image recorder (16) for recording the light reflected back by the object surface and by the reference surface and combined for interference;

An evaluation device (18) for determining a surface shape; (column 4, lines 44-52) and

The device of Tearney generates a signal from the interference of the combined measurement and reference beams at a detector. The detector generates electrical signals representative of the combined radiation and transmits the signals to a signal

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processing and control electronics and display unit where an image of the structure is obtained and analyzed. From this analysis, a surface shape can be determined.

At least one active optical element that is influenced by at least one of an electrical field and a magnetic field, the optical element being situated in at least one of the object beam path and the reference beam path, the optical element being adapted to change an optical path length of an object light path in relation to an optical length of a reference light path for a depth scanning, the interferometric measuring device arranged as a white-light interferometer, for the depth scanning, the optical length of the object path is changeable relative to the optical length of the reference light path without mechanically moving parts. (column 6, line 64 to column 7, line 13)

The device of Tearney can use a fiber stretcher in the form of a piezoelectric transducer element to stretch or contract the fiber of the reference and measurement arms while the reference mirror remains fixed. This modulates the optical beam paths, allowing the optical path lengths to change. By changing the lengths, the scanning distance into the sample is doubled (i.e. the depth is doubled, creating a depth scan). By using this piezoelectric transducer element to modulate the light beam, no mechanically moving parts are necessary.

Regarding claim 13, the at least one active optical element of Tearney's device is an electro-optical element. A piezoelectric transducer is an electro-optical element.

In regards to claim 15, a non-homogeneous electric field is applied to the piezoelectric transducer of Tearney's device for a controlled deformation of the wavefront. (column 7, lines 1-9) The periodic stretching and expansion of the fibers due to the actuation represent the controlled deformation.

Regarding claim 16, the at least one active optical element of Tearney's device has a non-homogeneous optical density for influencing a wavefront in a controlled manner. The fiber is stretched utilizing PZT ceramics. (column 7, lines 9-10) PZT ceramics have a non-homogeneous density.

In regards to claim 17, the at least one optical element of Tearney's device includes a dispersion compensating unit (197) to compensate for the optics used to focus and direct light from the optics system of the measurement arm. (column 7, lines 36-40) Lenses and lens systems focus and direct light. Therefore, the dispersion compensating unit is made of lenses or lens systems.

Allowable Subject Matter

Claims 1, 2, and 4-11 are allowed.

Claims 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 1 and 14, the prior art of record, taken alone or in combination, fails to disclose or render obvious the use of a second active optical element in a beam path of an interferometric measuring device for color or image error correction, along with the rest of the limitations of claims 1 and 14.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

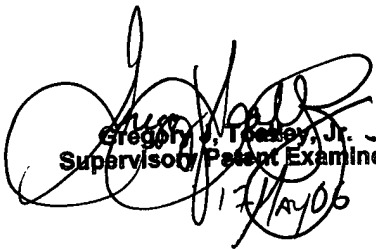
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa J Detschel
May 16, 2006
MJD


Gregory J. Tooley, Jr.
Supervisory Patent Examiner
11/14/06